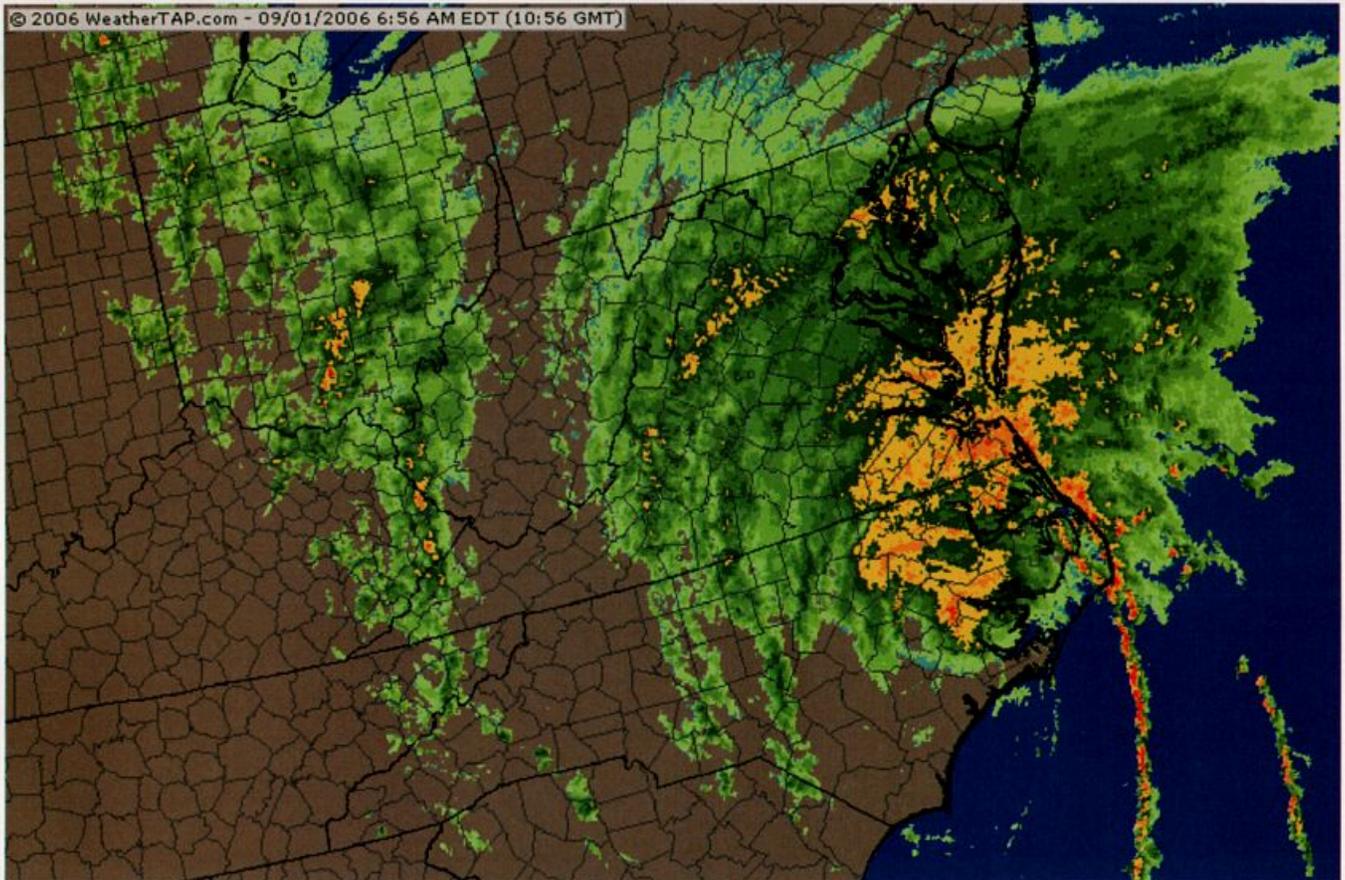


# Special Interregional Report: Tropical Storm *Ernesto*

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After making landfall in southern coastal North Carolina at Ocean Isle just before midnight on 1 September 2006, Tropical Storm *Ernesto* moved quickly toward southeastern Virginia (here 8:24 a.m. on 1 September). Overnight, the storm's north-northeasterly path (and counterclockwise circulation) resulted in strong easterly and southeasterly winds blowing directly toward the Chesapeake Bay mouth. As the storm entered Virginia, winds shifted southwesterly and westerly through the afternoon and next morning. Perhaps the storm's combinations of wind speeds and directions, along with the orientation of the Bay, resulted in the high diversity of seabirds in the lower Bay on 2 September: 11 tern species (among them 11 noddies between four sites), six tubenose species (including Sooty Shearwater and Bulwer's Petrel), Red-necked and Red Phalaropes, Sabine's Gull, and all three jaegers. In addition to most of these species, North Carolina lakes and sounds produced a Cory's Shearwater and a South Polar Skua—a most unexpected collection for a storm whose winds barely topped 112 kph [70 mph]. *Graphic courtesy of and © Weather-*

Tropical Storm *Ernesto* originated from a tropical wave and became a tropical depression on 24 August 2006, as the storm passed over the Windward Islands. It strengthened into a tropical storm the next morning over the eastern Caribbean Sea while centered about 480 km south of Puerto Rico. Continuing west-northwestward, the storm slowly strengthened and had maximum winds of 80 kph [50 mph] by the next morning. It turned northwestward on 26 August over the central Caribbean and con-

tinued to intensify. Early on the morning of 27 August, while centered about 112 km south of the southern coast of Haiti, the storm was briefly a hurricane with maximum winds of 120 kph [75 mph] (Figure 2).

*Ernesto* steadily weakened during the next day as it passed very near the southwestern tip of Haiti. The storm then made landfall on the southeastern coast of Cuba just west of Guantanamo Bay as a tropical storm. *Ernesto* turned northward, and its center remained over

Cuba for about 18 hours and emerged off the north-central coast early on 29 August. The storm continued northwestward with little change in strength and made landfall in extreme southern Florida early on 30 August with winds of about 70 kph [45 mph]. *Ernesto* weakened to a depression later that day while moving northward over the Florida peninsula. After departing the eastern coast of Florida near Cape Canaveral early on 31 August, the storm strengthened again over the warm waters of the At-

lantic while heading northeastward. *Ernesto* made landfall at 11:30 p.m. 31 August near Ocean Isle/Long Beach, Brunswick County, North Carolina, just west of Cape Fear, as a strong tropical storm with maximum sustained winds of 112 kph [70 mph]. It moved generally northward through eastern North Carolina during 1 September and exited the state as a depression by evening. Winds were never over 96 kph [60 mph] sustained, but rainfall totals were very high, such as 35.6 cm at Wrightsville Beach. By 11:00 a.m. on 1 September, the center of the depression was 128 km west-southwest of Norfolk, Virginia, moving northward at 22 kph [14 mph]. The storm moved into the Hampton Roads area of Virginia (the cities surrounding the Chesapeake Bay mouth and associated rivers) in the mid-afternoon, bringing up to 36 cm of rain (e.g., to Cape Charles), then rapidly back offshore around 2:30 p.m., where it was absorbed into a nontropical low and continued to the northeast.

The storm was underestimated in the Middle Atlantic, with property damages, flooding, and power outages catching forecasters off guard. Students of "hurricane birds" were also caught off guard: the storm's relatively weak winds were not expected to bring much more than a few Sooty Terns during the day of passage (1 September) through the Coastal Plain. Instead, 17 pelagic species were recorded between North Carolina and Virginia from interior/inner-coastal areas, and Maryland, the District of Columbia, New Jersey, Pennsylvania, and New York also recorded many of the same species. Because the storm's overland passage occurred mostly on a Thursday and a Friday, birder coverage of affected areas was moderate. Observers in the Chesapeake Bay area were galvanized by former regional editor Harry Armistead's early-morning mobile-phone report of two Brown Noddies at the extreme southern tip of the Delmarva on 2 September—a day that might not have gotten much birder attention had word not gone out via the Internet that Sooty Terns were widespread around the Bay area, in addition to the noddies.

Birders familiar with hurricanes in the region liken *Ernesto* to *Bertha* of 1996, which struck Carolina Beach, North Carolina during the night 12 July, moved mostly overnight toward Chesapeake Bay,



**Figure 1.** Tropical Storm *Ernesto* made landfall near Long Beach, North Carolina at about 11:30 p.m. (here 11:04) on 1 September 2006. The southern North Carolina coast has been "ground zero" for at least 17 landfalling hurricanes and tropical storms since *Hazel* of 1954, and most of these have produced records of pelagic birds on land or inshore. Graphic courtesy of and © WeatherTAP.com.

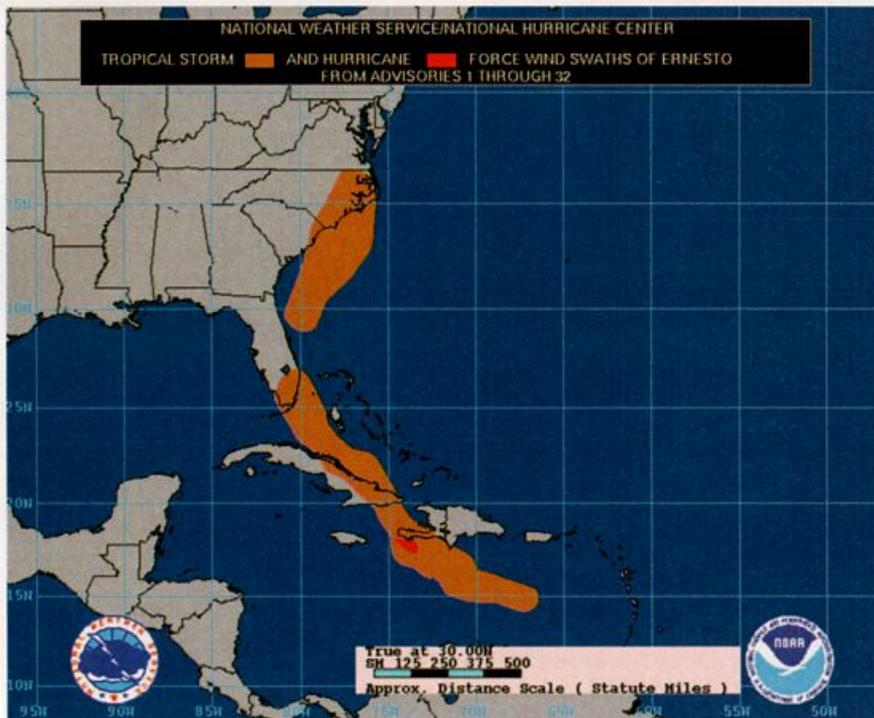
then exited across the Delmarva Peninsula, and accelerated up the coast. *Bertha*, however, was a stronger storm and struck in midsummer—the different time of year perhaps accounting for the much smaller number of Black Terns in *Bertha*, the greater strength of the storm (a Category 2 hurricane at landfall) perhaps the reason for greater numbers of Black-capped Petrels and Band-rumped Storm-Petrels in *Bertha*. Observers who remember Hurricane *David* of 5-6 September 1979 liken the proportions of terns (including 18 noddies in North Carolina, one in New Jersey) to that storm, and indeed *David's* track across the Lesser and Greater Antilles did resemble that of *Ernesto*. However, *David* had been a much more powerful storm (reaching Category 5 status) before it struck the Georgia coast as a Category 1; it made landfall during daylight hours; and its track took it along the Blue Ridge mountains, much farther west than *Bertha* or *Ernesto*. Tern counts in *David* were much higher than in *Ernesto*, particularly in the Carolinas, where hundreds of Bridled and Sooty Terns were found on the coast. *David* also displaced frigatebirds, whereas the only one noted in association with *Ernesto* was at Ft. Johnston, Charleston, SC 31 Aug (BMc), a Magnificent. (For observers listed only by initials herein, please refer to the corresponding regional report in this issue for full names.)

## Tubenoses

Given the track of the storm, it was not surprising that storm-petrels were observed in some numbers in the e. parts of the North Carolina sounds or in the mouth of Chesapeake Bay. However, *Ernesto* was underestimated by most observers, who were impressed by the numbers of storm-petrels involved, probably because the storm was never classed as a hurricane while in U.S. territory (other than at Guantanamo, Cuba). Pamlico Sound, *Dare*, NC held at least 100 Wilson's Storm-Petrels near Bonner Bridge, plus up to 2 Leach's Storm-Petrels and 3 Band-rumped Storm-Petrels 2 Sep (BP, ph. JL, Lois Schultz); 15+ Wilson's were still there 3 Sep, and 3 Wilson's and a Band-rumped were seen from the Hat-



**Figure 2.** Track of Tropical Storm *Ernesto*. The storm's track roughly resembles that of *David* of 5-6 September 1979. Green indicates storm status as tropical depression, yellow as tropical storm, red as hurricane. Graphic courtesy of and © Unisys, Inc.



**Figure 3.** Extent of hurricane- (red) and tropical-storm-force (orange) winds associated with Tropical Storm *Ernesto*. Winds in Virginia and states to the north never reached 72 kph [45 mph] sustained, so the storm was classed as a tropical depression as it crossed the North Carolina border into Virginia. Because winds associated with the depression were moderate, many birders assumed *Ernesto* would entrain few birds and so did not check local patches for storm refugees. Graphic courtesy of and © the National Oceanic and Atmospheric Administration.

teras—Ocracoke Ferry 4 Sep (RD). Inland, 3 Wilson's Storm-Petrels were at Buckhorn Res., Wilson, NC 1-2 Sep, with a Leach's Storm-Petrel there 2 Sep, while another Leach's and 11 Wilson's Storm-Petrels were at Jordan L., Chatham, NC 2-4 Sep (Nathan Swick, WCo, ph. Bill Majoros, m.ob.; Figure 4). To the n., Virginia's storm-petrels were mostly coastal: on 2 Sep, the Nansemond R. in Suffolk, VA had 15 Wilson's (CLW; 14 still near the Godwin Bridge 4 Sep); one was on the Potomac R. at Dyke Marsh, Fairfax, VA/Prince George's, MD (JK); and 50+ were observed at C.B.B.T., Northampton, VA (hereafter, C.B.B.T.; ESB). Farther from home was a Wilson's Storm-Petrel on the Susquehanna R. at Harrisburg, Dauphin (opposite Front St./State St.) 2 Sep and at Royalton Boat Launch 3 Sep (DH)—there are currently no documented records of this species for Pennsylvania. Reports of *Oceanodroma* were highest from C.B.B.T., where 71 Leach's (Figure 5), 3 Band-rumped, and 8 unidentified were recorded (ph., †ESB; RLAK); the number of Leach's is the highest observed at this location (previous high count was 20 after Hurricane Is-

abel in Sep 2003). A Band-rumped Storm-Petrel was seen well and videotaped at Penn Warner Tract, Bucks, PA 2-3 Sep (vt., †DF et al.; Figure 6), potentially a 2nd accepted record for the state: a specimen from the shore of L. Erie at Manchester Beach, Erie 24 Feb 1998 was not accepted, but one videotaped at Bald Eagle S.P. 19-20 Sep 2003, after Hurricane *Isabel*, was recently accepted as the state's first. Coastal New Jersey had reports of just 7 Wilson's Storm-Petrels, 2 at Seaside Park (*vide* Voice of New Jersey Audubon) and 5 at Cape May (MO'B, RC, CJV et al.), both 2 Sep.

Very much in keeping with birders' expectations, procellariids were very few in this relatively weak storm, with 4 individuals representing four species nonetheless a remarkable total: a Cory's Shearwater was at Buckhorn Res., Wilson, NC 1 Sep (RD); a Bulwer's Petrel (Figure 7) and a Black-capped Petrel were studied off the northernmost island of the C.B.B.T. (†ESB); and a Sooty Shearwater was carefully identified at College Cr., James City, VA (BW, BTa, TA). Virginia has records of some 61 Black-capped Petrels associated with

hurricanes since 1893, but over half of these (37) were a result of *Bertha* of 1996—prior to *Ernesto*, the weakest of all the storms that have brought Black-capped into the state. Bulwer's Petrel, reported twice previously in Virginia (1993, 1996), is not yet on the state's official list (but is confirmed in North Carolina, with at least two records), while Sooty Shearwater is unrecorded in Virginia in Sep. It is remarkable that the most abundant procellariids in adjacent pelagic waters in early Sep—Cory's, Greater, Audubon's Shearwaters—appear to have been little affected by *Ernesto*, although the paucity of coastal observers (virtually no seawatching occurred on the Atlantic coast s. of New Jersey) surely produced an incomplete impression of the storm's effects on larger tubenoses.

### Jaegers, skuas, and larids

The diversity of stercorariids and larids in the coastal mid-Atlantic is never greater than during hurricane landfall, but observers were shocked by the numbers of terns and jaegers counted during and after the passage of *Ernesto*, at least in areas to the n. of the storm's landfall point. The rarest of this group was an intermediate-morph South Polar Skua at Buckhorn Res., Wilson, NC 1 Sep (RD), a species reported only once before in the state's interior (L. Waccamaw, during and after Hurricane *Diane*, 13-14 Sep 1984). The sight of this great bird harassing a Bald Eagle, which executed "barrel rolls in attempts to evade the skua," must have been remarkable. Reports of single Pomarine Jaegers came from Ft. Macon, NC 1 Sep (NB), the Potomac R. at Violette's Lock, MD 2 Sep (DCz, RH et al.), and C.B.B.T. 2 Sep (ESB), but a staggering 32 passed Cape May, NJ 2 Sep (MO'B, CJV, RC et al.), nearly a record count there. Parasitic Jaeger, which usually outnumbers Pomarine in autumn reports, totaled only 31 during and after the storm, most of these from Maryland and New Jersey: 2 at C.B.B.T. (ESB); 12 at Tilghman I., Talbot, MD (JRe, LR); one at Holland Pt., Calvert/Anne Arundel, MD (TMD); one at Eastern Neck N.W.R., MD (WGE, NLM); one from Ocean City Inlet, MD (MLH); 10 at Cape May, NJ 2 Sep (MO'B, CJV, RC et al.; 3 there the previous day [RC]); one at South Amboy, NJ 2 Sep (*vide* Voice of New Jersey Audubon); one in Lancaster, PA 2 Sep (DH); one near the Fort Hunter Boat Launch, below York Haven Dam, Harrisburg, Dauphin,

PA 3 Sep (DH); one over the Susquehanna R. (thus in *Lancaster*) seen from Long Level, York, PA 3 Sep (T. Hopson); and one ad. at Conejohela Flats, *Lancaster*, PA 3 Sep (Tom Raub). Three juv. **Long-tailed Jaegers** were seen at Cape May 2 Sep (MO'B, CJV, RC et al.), one was at Hains Pt., D.C. (PP), and one dark-morph juv. spent 20 minutes harassing Black Terns at C.B.B.T. (ESB). Unidentified jaegers included one at Hatteras, NC 1 Sep (BP); one at C.B.B.T. 2 Sep (RLAk); 3 at Holland Pt., *Calvert/Anne Arundel*, MD 2 Sep (TMD); 2 at Ocean City Inlet, MD 2 Sep (MLH); one imm. at the Fort Hunter Boat Launch, *Dauphin*, PA 2 Sep, probably a Parasitic (CR, RK, Dave Yeany); and one at Sandy Hook, NJ 3 Sep (*fide* Voice of New Jersey Audubon).

Like jaegers, **Sabine's Gulls** that appear at interior sites during or after tropical storms may be entrained from offshore and displaced inland or simply grounded by low pressure during overland migration. An alternate-plumaged ad. at Buckhorn Res., *Wilson*, NC 1 Sep (RD, with 63 Laughing Gulls), a juv. at the C.B.B.T., VA 2 Sep (ph., †ESB; Figure 8), 2 juvs. near the Philadelphia airport along the Delaware R. in *Delaware*, PA 3 Sep (AG), a juv. at Ithaca, NY 3 Sep (Glenn Seeholzer et al.; Jay McGowan; Ryan Douglas)—relocated shortly thereafter at Myer's Pt., *Tompkins*, NY (and found independently; Mike Harvey, Tom Johnson)—and a juv. at Democrat Pt., Long I., NY 3 Sep (SSM, PL) were likely storm-related. Singles in the e. and cen. Great Lakes around that time (e.g., one in *Lorain*, OH 2 Sep [JP]) probably had no relation to the storm. (Higher-than-usual numbers of juv. jaegers and juv. Sabine's Gulls were reported throughout the Great Lakes in Sep and Oct, probably indicative of a productive nesting season in the Arctic.) Large concentrations of Laughing Gulls, common in stronger hurricanes, were not observed inland outside of North Carolina, but some numbers were moved into the w. Chesapeake Bay tributaries, the Delaware R., Delaware Bay, and the Susquehanna R. basin.

Although numbers of most tern species were by no means unprecedentedly high in *Ernesto*, the diversity of terns overall in this storm was as high as in any tropical storm on record in the East: 13 species of tern were recorded, as well as Black Skimmer. **Sooty Tern**, paradigm of hurricane birds, cut a swath from North Carolina to Connecticut—a typical spread for this

champion entraineé. The first birds were reported 1 Sep in North Carolina at the Wright Brothers Memorial, Kill Devil Hills, *Dare* (one; JL), Ft. Macon (3; NB, JF), Buckhorn Res., *Wilson* (2; RD), and the Goldsboro W.T.P. (3; ED). Most of the reports, however, came from the mid-Atlantic states. In Virginia, 8 (7 ads.) were seen moving upriver through the afternoon at College Cr., *James City*, VA 1 Sep (BW; BTa). The next day, when winds had abated to moderate southwesterlies and many observers considered the storm "over," there were mid-Atlantic reports of 86 birds in total: 14 at College Cr., *James City*, VA (ph. TA, BW, BTa); one at Shirley Plantation, *Charles City*, VA (AB, AD, ABr); 8 flying upriver at Violettes Lock, MD (DCz, RH et al.); one in *Arlington*, VA (John Fox); one at L. Needwood, *Montgomery*, MD (Helen Patton); one flying upriver on the Potomac R. at Dyke Marsh, *Fairfax, VA/Prince George's*, MD (JK); one flying downriver on the York R., *York*, VA (BW); 12 at Tilghman I., *Talbot*, MD (JRe, LR); 2 ads. at Hains Pt., D.C. (PP, MP); 2

ads. at Scientist's Cliffs, *Calvert*, MD (SS); 24 ads. at C.B.B.T. (ph., †ESB; DCI; Figure 9); one ad. in Norfolk, VA (DCI); 9 around Kiptopeke S.P., *Northampton* (HTA), plus 9 (including one juv.) overhead from the hawkwatch platform there (RLAn, TT). The next day, one ad. was found dead at Alexandria, VA (\*, ph., †David Bridge; Figure 10). Despite the paucity of observers, this fallout represents the *largest recorded* for this species in the Virginia/Maryland/D.C. area, larger even than documented in Hurricane *David* of 1979. One can only imagine how many might have been recorded if the storm had struck on a Saturday/Sunday!

As is frequently the case in weaker storms, fewer Sooty Terns were reported in states to the north: one or 2 at Conejohela Flats, *Lancaster*, PA 2 Sep (BS, DH et al.), 3 (2 juvs.) below the Columbia-Wrightsville bridge in Wrightsville, *York*, PA 2 Sep (CP), one ad. at and near The Rocks between Columbia and Washington Boro from *Lancaster*, PA 2-3 Sep (CR), and one Royalton Boat Launch



**Figure 4.** These Wilson's Storm-Petrels at Jordan Lake, North Carolina were among 11 found there 2-4 (here 4) September 2006 after Tropical Storm *Ernesto* passed to the east 1 September. Very few Wilson's have been satisfactorily documented in interior North America. Photographs by Bill Majoros.



**Figure 5.** Leach's Storm-Petrels were noted in two locations in interior North Carolina and photographed extensively at the Chesapeake Bay Bridge-Tunnel, Virginia 2 September 2006 (here), the day after *Ernesto* passed through the area. During the much stronger Hurricane *Isabel* of September 2003, the Leach's observed in Chesapeake Bay appeared to be exhausted and worn, but all 71 observed after *Ernesto* in the Bay seemed energetic and in relatively fresh plumage. Photographs by Edward S. Brinkley.

in Dauphin, PA 3 Sep (RK, AM, JHe, Peter Robinson, Joan Renninger)—all along the Susquehanna R. (thus some duplication possible). Elsewhere in the Northeast, 2 were seen at along the Delaware R., Delaware, PA 2 Sep (JHo); an ad. was at Jacob Riis Park, Queens, New York City 2 Sep (Isaac Grant); one juv. was at Democrat Pt., Long I., NY 3 Sep (SSM, PL); and 11 flew past Cape May, NJ 2 Sep (3 juvs.; MO'B, CJV, RC et al.). Farthest n. of *Ernesto*'s birds was a juv. Sooty Tern off Shippan Pt., Stamford, CT 2 Sep (PD).

**Bridled Tern**, unlike Sooty, tends to stay mostly in coastal areas rather than dispersing inland, and indeed most

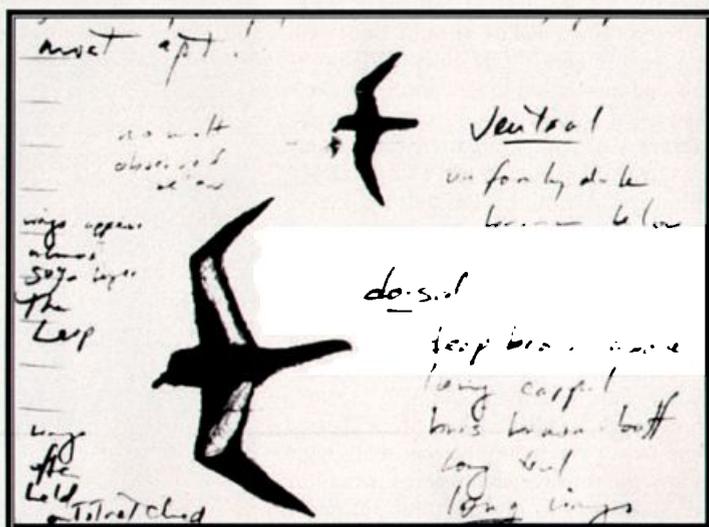
*Ernesto* reports were coastal. On 1 Sep, singles were at Ft. Macon (JF) and Hatteras, NC (BP); 3 were seen flying over Seaside Rd., Northampton, VA (ESB), with singles at nearby Townsend (JR), C.B.B.T. (Tom Saunders), and Cape Charles (ESB); and 7 were noted at Cape May, NJ (RC, Alan Brady, Karl Lukens). Much larger counts were made 2 Sep, including: 83 (all subads. or molting ads.) at the C.B.B.T. (ph., †ESB; Figure 12); one at nearby E.S.V.N.W.R. (DCI); 7 at College Cr., James City, VA (TA, BW, BTa); 12 at Cape May, NJ (MO'B, CJV, RC et al.); and one at coastal L. Takanassee, Monmouth, NJ (FL, ph. AT, SB et al.; Figure 11). One was seen at Shinnecock Inlet, Suffolk, NY

the next day (AB). Away from the immediate coast, 3 were at Holland Pt., Calvert/Anne Arundel, MD 2 Sep (TMD), 2 at Patuxent Oxbow L., Anne Arundel, MD 2 Sep (Jay Sheppard, Marcia Stutzman), 8 at Buckhorn Res., Wilson, NC 1 Sep (RD), and 10 resting on a pier at L. Waccamaw, Columbus, NC 1 Sep (Che)—the latter one of the higher inland counts for this species in North America. Unidentified dark-backed terns, either Bridled or Sooty, included 5 at Falls L., NC 1 Sep (WCo, JP), 2 at River Park North, Greenville, NC 1 Sep (Josh Southern), 3 at Holland Pt., Calvert/Anne Arundel, MD 2 Sep (TMD), one at Spruce Run Res., Hunterdon, NJ 2 Sep (Mike Hyotis), and 2 at Hamlin Beach S.P., near Rochester, NY 6 Sep (KG, RSp). Many of these were thought to be Sooty Terns.

The timing, track, and strength of *Ernesto* must have been favorable for entraining Brown Noddy, a species hardly known n. of North Carolina. On 2 Sep, Virginia saw four reports of the species: 2 were critically identified at Sunset Beach, Northampton (†HTA); at least 2 were at C.B.B.T. (†ESB); one was at Town Pt., Suffolk (†CLW); and one was studied from College Cr., James City, VA (†BTa, BW). Additionally, 5 unidentified noddies at the C.B.B.T. 2 Sep (†ESB) included 2 that appeared to be small, slender of wing and bill, and showing "neat, white polls with clearly demarcated rear borders"—thus potentially Black Noddies, a species unreported n. of North Carolina



**Figure 6.** This Band-rumped Storm-Petrel, potentially Pennsylvania's second, was located at the Penn Warner Tract, Bucks County 2 (here) and 3 September 2006. Photograph from videotape by Devich Farbotnik.



**Figure 7.** Field sketch of Bulwer's Petrel at Chesapeake Bay Bridge-Tunnel, 2 September 2006. Records of this species off the Atlantic coast have increased rapidly 2004 through 2006 (eight records, as yet unpublished, off the mid-Atlantic states and North Carolina), almost all the result of deep-water marine mammal and seabird surveys conducted by scientists. There are otherwise only 20 reports of the species in the western North Atlantic. Sketch by Edward S. Brinkley.



**Figure 8.** This juvenile Sabine's Gull at Chesapeake Bay Bridge-Tunnel, Virginia 2 September 2006 was one of at least six discovered after the passage of *Ernesto*. Photograph by Edward S. Brinkley.

and not confirmed in the East n. of Florida. These birds were distant enough that certain identification was not tendered. The absence of noddies in North Carolina and anywhere n. of Virginia seems anomalous, but the bulk of *Onychoprion* terns were recorded in the Chesapeake Bay region—about 75% of the Bridled Terns and 60% of the Sooties. It stands to reason that the less-common Brown Noddy would be detected in areas of greatest concentration of the other pelagic terns, as was the case in Hurricane *David* of 1979. Storms of moderate to low strength, such as *Bertha* of 1996, appear to allow terns driven into the Bay to reorient back to sea rather quickly (e.g., fewer are recorded at Cape May, NJ, than in stronger storms) and appear to drive fewer farther inland. Brown Noddy has been recorded onshore n. of Florida after 14 hurricanes since 1926 (50 birds in total), but only four times n. of Virginia: at Martha's Vineyard, MA (Hurricane *Carol*,

1954); at Block I., RI (3 birds) and Stone Harbor, NJ (both Hurricane *Donna*, 1960); and at Cape May Point, NJ (Hurricane *David*, 1979).

The intensity of a tropical storm might be just as accurately gauged from records of various "white terns" as from those of the tropical pelagic species. Evidence of *Ernesto's* relative weakness, few white terns were found inland, and concentrations on the coast were mostly unremarkable. At productive Buckhorn Res., Wilson, NC 1 Sep (RD), there were 8 Least, 38 Common, 16 Forster's, 65 Royal, and 17 Sandwich Terns, plus 2 Black Skimmers, the only skimmers reported inland, though a few moved into the James R. in Virginia 2 Sep (BW, BTa, TA). Virginia also had displaced Least Terns, 2 at Dyke Marsh, *Fairfax* 1 Sep (JK) and one at Shirley Plantation, *Charles City* 2 Sep (AB, AD, ABr). Interior areas of the mid-Atlantic had eight reports of Forster's Tern 1-3 Sep, notably 2 at Swift Creek Res., *Chesterfield*, VA (PB); 20 at Shirley Plantation 2 Sep (AB, AD, ABr); 20 at Hains Pt., D.C. 2 Sep (PP, MP); and a few on the Potomac R. at Great Falls, *Montgomery*, MD (RW). Away from Buckhorn Res., Wilson, NC, Royal Terns were widely but unevenly displaced inland in most states: North Carolina one at Falls L. 1 Sep (WCo, JP); Virginia had one 1 Sep at Dyke Marsh, *Fairfax* (JK), one at Possum Pt., *Prince William*, VA 2 Sep (JK), and 2 at the Benjamin Harrison Bridge near Hopewell, VA 2 Sep (AD); Maryland had one at Violettes Lock 2 Sep (DCz); the District of Columbia had one at Hains Pt. 2 Sep (RH, Lisa Shannon); and Pennsylvania had singles along the



**Figure 10.** This adult Sooty Tern was found dead at Alexandria, Virginia 3 September 2006 after the passage of *Ernesto*, by then a tropical depression. It was the only individual of its species found dead after the storm's passage, though about 125 other individuals were reported between North Carolina and Connecticut. Stronger storms tend to produce more records of moribund and dead Sooty Terns and other pelagic birds. Photograph by David Bridge.

Delaware R., *Delaware* 2 Sep (JHo) and at Green Pond, *Northampton* 3 Sep (DW). Caspian Terns were widely reported, mostly in the Coastal Plain. The only Gull-billed Terns were 2 in s. *Northampton*, VA 31 Aug, perhaps not related to *Ernesto* (ESB), and singles near the Philadelphia airport, along the Delaware R., *Delaware*, PA (JHo) and at Forsyth N.W.R., *Atlantic*, NJ 3 Sep (*vide* Voice of New Jersey Audubon), which almost certainly were storm-driven. A juv. *Roseate Tern* at Cape May (RC, MO'B, CJV) and 12 *Roseates* at Sandy Hook, NJ, both 2 Sep (*vide* Voice of New Jersey Audubon), were the only ones reported.

Tern numbers were clearly elevated on the Chesapeake Bay, and several locations saw large storm roosts and flocks totaling 1000+ Common Terns, e.g., at Cape Charles 1 Sep (JR et al., ESB) and Cape May 2 Sep (RC, MO'B, CJV et al.). (For comparative context, Cape Charles also had 288 Royal, 21 Caspian, 380 Forster's, 11 Least, and 28 Black Skimmers; Cape May had 150 Royal, 300 Forster's, 10 Least, and 40 skimmers.) A few Common Terns were also noted away from the coast, where rarer, e.g., one at L. Anna, *Louisa* 1 Sep (John Bazuin) and 2 at Hains Pt., D.C. 2 Sep (PP, MP). The large Cape Charles roost contained up to 2 ad. *Arctic Terns* 1 Sep (ESB, JR et al.), a species also seen at Cape May, NY 2 Sep (juv.; RC, MO'B, CJV et al.) and along the Delaware R. in Pennsylvania both in *Delaware* (7 birds; JHo) and in *Bucks* (one; DF), both 2 Sep. Sandwich Tern numbers were moderate, and all were found on the coast: 130



**Figure 9.** These adult Sooty Terns were among 24 adults at Chesapeake Bay Bridge-Tunnel, Virginia 2 September 2006. Juvenile Sooty Terns were much scarcer in *Ernesto* than in other tropical systems that have taken similar tracks at this time of year; only eight (6%) were specifically reported. Photographs by Edward S. Brinkley.



**Figure 11.** This adult Bridled Tern at Lake Takanassee, New Jersey was one of 136 reported out of range as a result of *Ernesto*, spanning from the area of landfall in southern North Carolina to Long Island, New York. Remarkably, this bird, and another in Hatteras, North Carolina 1 September, were the only clean adult Bridled Terns documented anywhere as a result of *Ernesto*; all others appeared to be molting or subadult birds, and no juveniles were reported. Photograph by Alex Tongas.

were seen flying southward at Cape Charles 1 Sep, but only 25 at C.B.B.T. the next day (ESB), while 4 at College Cr., James City, VA 2 Sep furnished just the 4th local record of the species (BW, TA, BTa). Singles near the Philadelphia airport along the Delaware R., Delaware, PA 2 Sep (JHo) and at Cape May, NJ the same day (RC, MO'B, CJV et al.) were the northernmost.

*Ernesto* clearly hit **Black Terns** at the peak of their migration. In Florida, 6800 were found concentrated at Santa Rosa I. 31 Aug (BD, LD). At least 400 in a storm roost on the grounds of the Wright Brothers Memorial, Kill Devil Hills, Dare, NC 1 Sep (JL) and hundreds at Ft. Macon

(NB, JF) were certainly indicative of displacement; inland in that state, 40 were at Falls L. (WCo, JP et al.), 50+ at Goldsboro (ED), and 101 at Buckhorn Res., Wilson (RD), all 1 Sep. In Virginia, at least 712 were tallied, the highest such count since about 1967, and Black Tern was in fact the most widespread tern species reported: 323 were reported from four Virginia locations 1 Sep, including 123+ at College Cr., James City, VA (BW, BTa), 170+ at Cape Charles (ESB, JR et al.), and 25 at L. Anna, Louisa (JB). On 2 Sep, 383 were reported from 20 locations across e. Virginia, Maryland, and the District of Columbia (m.ob.), with notable counts 175 at College Cr., James City, VA

(TA, BW, BTa), 24 at Holland Pt., Calvert/Anne Arundel, MD (TMD), 12 at Tilghman I., Talbot, MD (Jan Reese, Les Roslund) and the same number at Eastern Neck N.W.R., Kent, MD (Walter Ellison, Nancy Martin), 97 at C.B.B.T. (ESB; RLak), and 25 at Irish Grove, Somerset, MD (Paul Bystrak, Sue Ricciardi, Doty Mumford). Like most other terns, Black Terns departed the mid-Atlantic area rapidly, with only two reports of the species 3 Sep and one 4 Sep. Pennsylvania and New Jersey had dozens of reports of Black Tern, most of the counts slightly to well above normal, with higher counts of 26 at Penn Warner Tract and 22 at Bristol, both in Bucks, PA 2 Sep (DF); 33 at Palmyra Cove, NJ 2 Sep (*vide* AH); and 7-9 at Spruce Run Res., Hunterdon, NJ 2-3 Sep (Mike Hyotis). At Cape Henlopen, DE, 70 on 3 Sep (ES) was a high number for recent seasons; on the other side of Delaware Bay, Cape May seawatchers had tallied 20 Black Terns 2 Sep and 4 the previous day (RC, MO'B, CJV et al.).

## Shorebirds

At least 29 species of shorebird were mentioned as having been affected by the storm; most of these are treated in the respective regional reports. Aside from Red-necked and Red Phalaropes, most of these appear to have involved downed migrants rather than long-distance displacements—one exception being an American Oystercatcher along the Delaware R. in Philadelphia, PA 3 Sep (JHo, vt. DF; Figure 13). Another oystercatcher at College Cr., James City, VA 2 Sep (TA, BW, BTa) furnished just a 5th local record. Three Willets at Buckhorn Res., Wilson, NC 1 Sep (RD) were most likely *inornata*, either displaced from the



**Figure 12.** All of the 83 or so Bridled Terns identified at Chesapeake Bay Bridge-Tunnel, Virginia 2 September 2006 (here) appeared to be subadults or potentially molting adults, which have rather "messy"-looking head patterns and mottled brownish backs, in contrast to the natty black/white appearance of adult Sooty Terns. Photographs by Edward S. Brinkley.



**Figure 13.** This American Oystercatcher, Pennsylvania's fourth, was located at along the Delaware River in Philadelphia 3 September 2006; it was best seen from Ferry Road in Camden, New Jersey. Photograph from videotape by Devich Farbotnik.



**Figure 14.** Three Red-necked Phalaropes at Chesapeake Bay Bridge-Tunnel, Virginia 2 September 2006 (here) were among at least 569 reported along Ernesto's track. Photographs by Edward S. Brinkley

coast or grounded while migrating. Single American Avocets where rare were at Falls L., NC 2 Sep (*vide* GT) and C.B.B.T., VA the same day (ph. ESB). Especially worthy of mention is the flock of 30 Hudsonian Godwits seen from Lancaster, PA between Columbia and Washington Boro in the morning of 2 Sep (CP); a flock this size had not been seen in Pennsylvania in decades. Large groups were also noted during and after the storm from New Jersey to Virginia, but a good flight extending from the District of Co-

lumbia into e. Canada had been underway for several days. At Cape May, where the only all-day seawatch occurred, shorebird numbers of smaller sandpipers were clearly elevated, e.g., 800 Sanderlings, 200 Least Sandpipers, 50 Semipalmated Sandpipers, plus 5 White-rumped, one Baird's, 6 Stilt, and 3 Pectoral Sandpipers 2 Sep (MO'B, CJV, RC et al.).

**Red-necked Phalarope** migration begins as early as mid-Jun in the Northeast but peaks in the mid-Atlantic much later, in Sep,

and many counts of this species were locally noteworthy: 262 at Cape May 2 Sep (MO'B, RC, CJV et al.); 20 at Fort Hunter Boat Launch, Harrisburg, Dauphin, PA 3 Sep (DH; 3 there 2 Sep [CR, RK, Dave Yeany]); 13 at Forsyth N.W.R., Atlantic, NJ 2 Sep (*vide* Voice of New Jersey Audubon); 16 at Shirley Plantation, Charles City, VA (AB, AD, ABr, 5 there 3-4 Sep); 122 at Buckhorn Res., Wilson, NC 1 Sep (RD); 8 at the Goldsboro, NC W.T.P. 1 Sep (ED); 49 at along the Delaware R., Delaware, PA 2

Sep (JHo); 19 in Bucks, PA 2 Sep (DF); 8 at Pennsylvania Power & Light's Martins Creek plant, Northampton, PA 2 Sep (RW); and 8 at Prime Hook N.W.R., Sussex, DE 2 Sep (ES). A flock of 20 phalaropes at Eastern Neck N.W.R., Kent, MD (WGE, NLM) was almost certainly comprised (at least mostly) of Red-neckeds. Additionally, all on 2 Sep, Maryland had reports of 4 at Holland Pt., Anne Arundel (TMD); 3 on the Potomac R. at Violettes Lock, Montgomery (DCz); and one at Trout Run W.T.P., Garrett (JBC, MH, JLS et al.); and Virginia had one in Clarke (ph. JL, BJL), 2 at Huntley Meadows, Fairfax (JK), one along Arlington Rd., Northampton (Karen Beatty), and 3 at C.B.B.T (ph. ESB; Figure 14). One was on the Susquehanna R. near the Marysville Boat Launch, PA 3 Sep (RK, Andrew Markel, JHe, Peter Robinson, Joan Renninger), and about 8 were recorded on the New Jersey coast between Sandy Hook and L. Takanassee 2-3 Sep (m.ob.). **Red Phalarope**, always the scarcer of the two pelagic *Phalaropus* in the context of hurricanes, numbered 10 at along the Delaware R., Delaware, PA 2 Sep (JHo), 3 along the same river in Bucks, PA 2 Sep (DF), 3 at Buckhorn Res., Wilson, NC 1 Sep (RD), and one at Cape Charles, VA 1 Sep (ESB).

## Birders' Exchange



Photo by Nancy Beal  
Violet-crowned Hummingbird

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